FOOD SCRAP GARDENING

How To Grow Food from Kitchen Scraps, Reduce Waste and Feed the World

WILL COOK

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Will Cook

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Introduction: The Truth About Food Waste

Every time that you scrape off the food from your plate into the trash bin or you throw out food you didn't have a chance to eat, you're contributing to the 40% of perfectly good food wasted in the United States. Taken another way, of all the food produced in the United States at any one time, nearly half of it ends up in dumpsters, landfills, and the swill. That's about $165 billion a year. Rather awesomely stupid if you stop to think about it, isn't it?

It's the Restaurants...isn't it?

You can't really blame the restaurants and other retail food outlets completely. About 24% of the wasted food comes from ordinary American households, worth about $40 billion a year. To put it in more concrete terms, the average household throws out about $30 of edible food a month or 20 pounds of food.

Aside from the actual food cost, such wastage represents a quarter of the freshwater and 4% of the oil Americans consume every year. Currently, we are experiencing shortages in both, and it is getting harder every year to feed the planet's population. If we waste just 10% less food per household, it would be enough to feed 16 million people.

The environmental impact of all that wasted food is also considerable. Uncontrolled decomposition releases methane into the air, exacerbating the greenhouse effect that we all know only too well. Methane is 21 times worse than carbon dioxide when it comes to heating up the planet and melting those ice caps.

What can I do?

So what do all these numbers mean? It means that it is about time we all did something about all the food wasted, and it is much easier than you may think. There are several strategies that we can employ, but some are more elegant than others. The most obvious is to stop buying more than we can consume and to consume whatever we buy. But even then, you will still have some food that will have to go into the trash such as seeds, peelings, and other parts you don't use in cooking, right? Well, actually...

Remember when we spoke of just keeping 10% of our waste out of the waste can? Well, that's what this book is all about.

It's known by many names but the most succinct would probably be a kitchen garden; not because you grow them in the kitchen but because that's where it comes from.

Much of the vegetables and fruits that you use daily can be regrown, and the parts that can't be used for that purpose can be used as an aid to growing your own fruits and vegetables. You don't need a large area or even a garden to grow your own vegetables. With a little ingenuity, and the help of this book, you can grow your own produce, save some money, and help save the environment as well. Skeptical? Read on.

Chapter One: What you need to know first

A kitchen garden takes many forms, and the chosen method will depend on what plants you plan to grow. Some are more finicky than others, but they can all be done in the ordinary household.

STARTING METHODS

Before anything else, you need to know about how to get your seedlings started. There are several methods for growing your own personal “nursery” for your kitchen garden. The method you choose will depend on the plant you want to start propagating. Below are the five most common methods for getting your seedlings to grow properly. Choosing the wrong method can result in your plants dying, and that’s sad.

WATER METHOD

You may have at some time in your life sprouted a potato suspended in water as part of a science experiment. The water method works for tubers or plants that already have a ready supply of nutrition as they grow out their roots. This is true for potatoes, beets, avocado, and other tubers, root plants, and those with pits. Basically, you suspend the root or tuber using toothpicks or wooden skewers in a jar full of water where half of the plant is submerged. Wait until the roots achieve a length of 4 inches and then you can transplant it to soil.

Bag method

If you're not sure if the plant will take root in water, you can cozy it up with sphagnum peat moss in a resealable plastic bag. Sphagnum is different from regular peat moss, but they are used interchangeably. Sphagnum is readily available in garden supply stores, but you need to be careful when choosing the kind of moss you need. Select a bag that is completely dry and the sphagnum is light brown and free of clumps. Before using the sphagnum, you need to soak it in water. Drain the water until it is just slightly damp before placing it in the plastic bag with your plant. If you are working with seeds, use finely ground milled sphagnum as a starting medium. You will need to check the bag regularly in case of mold or decay. If it seems to be too damp, open the bag and let it breathe for a day. You may need to replenish the water.

This method produces seedlings that will need to be hardened off prior to transplanting to avoid killing them. If you have ever brought home fish from the pet store, you know to place the bag in the tank for an hour or so to equalize the water temperature before tipping the new fish into the general population. It's the same for seedlings, but it will take 7 to 10 days. Gradually acclimatize the seedlings to more rigorous conditions (sun, wind, rain) by placing them outside starting from 3 hours under controlled conditions, gradually lengthening exposure until the seedlings toughen up. You can also withhold water and fertilizer just short of wilting for about 7 days before transplanting to soil.

Pebble method

Vegetables like carrots and onions will take better root using pebbles available in any pet store or gardening supply store. Fill any container with a tight lid halfway with clean and dry pebbles. Place the plant section and add more pebbles around the plant to keep it upright. Add water to just the level of the pebbles. Add water as needed.

Direct method

Most root plants will get a good start being planted directly in soil. You need fresh and firm specimens stripped of leaves and stems. Make sure the skin of the root crop is intact. Place damp soil in a pot and make a hole deep

enough to place a third of the root in, and fill in the hole, patting down firmly. Add water when the soil becomes dry.

Seed-starting method

Some vegetables such as tomatoes and peas start life from seeds that you can prepare yourself. Remove seeds from the casings and clean thoroughly so that no flesh remains. Dry overnight and plant directly on damp soil. You can do this outdoors or if the weather is not favorable, start indoors, transplanting outdoors when seedlings come up.

If you want to try all five methods, just make sure that you know what plants do well with each one and that you have what you need. There are also some other considerations when you start your kitchen garden.

Things to Remember

1. It is best to use organic produce, which are easier to propagate.

2. A windowsill or your front porch is space enough for quite a few plants and herbs. If you have a flower pot, you can have a kitchen garden. You don’t need to have a large space to plant celery, for example. You can also consider a tower garden or hanging pots.

3. You will not always get the results that you expect. In most cases, growing vegetables and fruits from a store-bought source will not grow true to form.

4. Keeping a kitchen garden provides a wonderful opportunity to teach your kids about the environment and nature. It also instills in them a sense of independence when they get to eat what they have helped grow.

5. Growing plants indoors or on the window sill helps clean and humidify the air and removes toxins to keep you healthy. They also help keep the air smelling fresh.

6. It is an environmentally-friendly activity. Food waste from ordinary households comprise 20% to 30% of the garbage that ends up in landfills.

7. It is budget-friendly because you are growing your own vegetables and fruits.

8. Indoor plants and herbs add esthetic and stress-relieving value to your home.

9. It is a great hobby.

10. It is something you can brag to your friends about and maybe inspire them to do the same in their own homes.

11. In most cases, you can use old produce that can no longer be cooked and would most likely be thrown away.

12. You can make your own fertilizer and natural pesticide using some of the kitchen scraps that you can’t otherwise use such as skins, peels, and spoiled milk.

Chapter Two: Food in Trash

The list of vegetables and fruits that can grow indoors is longer than most people realize, although we will only tackle the ones that won't absolutely require more space than you may have, such as a yard. The plants described in this section not only look great around the house, the porch, and the yard (if you have one), but you can actually harvest them for kitchen use! We'll start with the ones that are easiest to grow. Some of them may already be growing in your refrigerator!

You should note, however, that you won't always meet with success. Some are as easy as falling off a log; some are more challenging. The first few times you may be disappointed when your plants wilt or refuse to bear flower or fruits. But that is all part of the fun and the learning experience. If you keep trying, you are bound to find something that will work for you!

Spring Onion

Spring onions are also known as green onions. If you have ever dipped a chip in sour cream and onion, you will have noticed tiny flecks of green in the sea of cream. This is the onion part! You also use chopped spring onions in many dishes, usually as a garnish, but also as a flavoring agent.

You can enjoy spring onions all year around by growing them yourself and getting them as you need them. Never will you run out or be left with a wilted plastic bag at the bottom of your vegetable crisper! Put it in scrambled eggs, soups, dips, or sauces for flavor and as a garnish.

Here's how:

1. Take a store bought bunch of spring onions.

2. Cut off the leaves and use it for cooking, leaving the root tips intact.

3. Half fill a flower pot with soil and carefully insert the roots, leaving about half of the stem above the soil.

4. Water well and place in a sunny spot of your window or porch.

5. Cut off the shoots as you need them, leaving the roots in the soil. They will grow back.

6. You can also choose to grow it in a jar full of water. You need to replace the water every three days or so.

Tip: This works the same way for scallions and leeks, and you can plant them in the same pot!

LEMONGRASS

Lemongrass is both a food and an herb, although it is technically a grass. It is also known as citronella, which is well-known for warding off mosquitoes. Other names for it include camel's hay, geranium grass, and Cochin grass.

It is used to cure gastrointestinal disorders by infusing it in water, adding sugar and ginger for taste, and taking one cup every 8 hours. It alleviates diarrhea, stomach cramps, gas, fever, flu, and vomiting. As an essential oil mixed with coconut oil, lavender oil, or other essential oils, it is also found to be effective against back pain, neuralgia, rheumatism, headaches, jetlag, and stress-related aches and pains. It is also said to kill cancer cells.

As food, lemongrass is often found in Thai cooking and imparts a lemony, zesty flavor to any dish. The world-famous Tom Yum Soup that admirably showcases lemongrass is actually being studied by scientists for its health benefits.

Growing your lemongrass makes sense in a lot of ways. Even if you are not particularly adept at using it in your cooking, the medicinal and pest control properties alone should be enough to convince you to try it out.

Here's how:

1. Choose lemongrass which have firm stalks; this indicates that it is fresh.

2. Cut off the leaves and immerse the roots in a container with water. Leave about half of the length in the open air. Place in a sunny part of your porch or window sill.

3. After one week, there should be new growth. Prepare a large flower pot with soil and transplant the lemongrass. Place it back on the windowsill where the sun reaches.

4. Wait until the shoots are about a foot tall before you start harvesting. You can just cut off what you need without uprooting the plant.

5. Make sure you water regularly.

6. You can also leave the lemongrass to grow and use it as a houseplant.

GINGER

The medicinal properties of ginger are well-documented, and it certainly puts a zing to any dish!

Ginger is the root of a plant known as *Zingiber officinale* which is attractive with its white and pink flowers and grows the whole year around, which is why it is often used in landscaping. The ginger root is the component often used as medicine or spice but in some cultures it is also pickled and eaten as a snack. It is used fresh or dried, and it can be processed to extract the juice and the oil.

Ginger is used most commonly to cure motion sickness, gas, stomach aches, diarrhea, nausea (especially after cancer treatments), and vomiting. It alleviates many aches and pains including menstrual pain, muscle soreness, chest pain, and low back pain. It is also effective in combating respiratory infections, coughs, and bronchitis.

In food, the spicy root is used to enhance the flavor of food and is sometimes used as a refreshing tea. If left in the refrigerator, it can grow shoots so that should give you an idea how easy it is to regrow!

Here's how:

1. Take a piece of ginger, preferably fresh and firm, and place it wholly in the soil in a pot.

2. Place the pot in a shady spot in the house where the sun hits through a window or through curtains. Make sure the soil is damp. Water occasionally.

3. Shoots will begin sprouting in a few days, and the root will begin to sprawl out.

4. When you need ginger, simply pull out the entire plant and cut off a piece.

5. Replant the remaining root.

6. Ginger plants make a great houseplant as well.

POTATOES

Potatoes are something that you use frequently. You can bake it, fry it, or boil it, and it goes great with any dish. The great thing is you don't need the whole potato to grow just one plant. While it will grow even in your refrigerator, potatoes grow best in nutrient-filled soil.

Here's how:

1. Choose a potato that has a lot of "eyes" (check out the picture above). This is where the roots will form. You can also take portions with eyes from several potatoes you plan to cook.

2. Cut the potato into 2-inch cubes but make sure that in each cube you have at least one, preferably two, eyes.

3. Leave the pieces for a day or so in room temperature to dry out the surface moisture.

4. In the meantime, prepare a long pot with soil mixed in with some compost materials (i.e. used coffee grounds). Keep the soil loose and damp.

5. Dig out holes 8 inches deep and 1 foot apart. Place each potato portion with eyes up halfway down the hole.

6. Fill the remaining 4 inches with soil. Water and place in a sunny portion of the porch or window sill.

7. As the plant grows, you may have to add more soil. Water regularly.

8. Add more soil around the plant when it reaches 6 inches tall. This is called hilling.

9. When the plant starts to die, it is getting close to harvesting.

10. Carefully dig around the plant to see how big the potato is. When you think it's a good size, dig out the potato and enjoy! Don't forget to replant to keep the crop going!

GARLIC

Garlic is another produce you always have in your refrigerator that regrows without any prompting. Most dishes benefit from this pungent bulb, which is actually part of the onion genus. Really!

The garlic plant, or *Allium sativum*, grows to about 2 feet in height. The bulb is the most commonly used part of the plant, and its medicinal value has been well-documented. It is used to control high blood pressure and coronary heart disease. It is known to lower cholesterol levels and reduce the risk for atherosclerosis. It is also thought to be efficacious for treating benign prostatic hyperplasia, diabetes, cold, and flu as well as preventing a variety of cancers. Other medical benefits include the treatment of gout, asthma, snakebites, hemorrhoids, and sinus congestion.

Growing garlic is easy and cheap. You only need to keep one clove from a bulb to start your garlic plant.

Here's how:

1. Prepare a pot with some soil.

2. Place a single whole clove, root down, into the soil, about 6 inches apart. Position the pot in a portion of the sill or porch with direct sunlight.

3. When shoots start to show up, cut them back to start the bulb growing. You can also wait for the shoots to curl before cutting them. These are called garlic scapes, and they are great as a flavoring vegetable. The taste is not as strong as garlic; it gives a hint of garlic, which works for some dishes.

4. Once you cut the shoots or collect the garlic scapes, give it a good watering. This will be the last watering your garlic plants will get before harvesting.

5. It will take approximately 20 days before the garlic bulb is ready to be harvested. You will know it is time when the lowest 3 leaves (a garlic plant will put forth about 9 leaves all in all) turn yellowish.

6. Dig up your garlic bulb by loosening the soil around it with a garden fork before carefully pulling out the entire plant without bruising the tender

bulb. It will still be half-green, which is the perfect state for garlic curing. Replant another set of garlic cloves after you harvest.

7. Lay out the plants in a warm dry place for about a week, preferably a rack. The smell can be pungent and will drive away mosquitoes.

8. Cut off the stems to about 5 inches from the bulb using pruning shears, trim off long roots, and remove excess soil. Return the trimmed bulbs in the drying area and leave for another week.

9. Complete the curing process by leaving the bulbs outdoors to completely dry out for another week. They will be firm and form paper scales.

ONIONS

And speaking of onions, it is another produce that is so easy to grow it is a wonder not more people do it. The onion is one of the most frequently used ingredients in the kitchen. It is put in soups, salads, meat dishes, dips, sauces...you name it, onions are probably in it! It is no wonder that it is one of the most cultivated vegetables in the world. It is unknown in the wild but has been cultivated for at least 7,000 years. There are many varieties of the bulbous plant, but the most common are white, red, and yellow. What they all have in common is that they are easy to grow, transport and use.

Here's how:

1. When preparing to cut an onion for your daily meal, cut off ½ inch from the root end and set aside.

2. Prepare a pot with soil and place the onion root in the soil, covering it to the top.

3. Place in an area with plenty of sun. Keep the soil moist at all times while the onion establishes its roots.

4. As soon as the onion starts sprouting, you can actually use the leaves, and you can use the bulbs at any stage of growth. If you really want a whole onion like the one you buy in the market, then you will want to wait until the plant starts to wilt and die. Bend over the remaining leaves and then leave the bulb in the soil for 10 days or at most two weeks to complete the maturing process.

5. Pull up the bulbs and lay them outdoors to dry for a day or so or until the roots curl up. The bulbs will dry better on a warm or sunny day. You want this if you want the onions to keep.

6. Bring the bulbs indoors or in a shaded area of the porch out of the path of direct sunlight but with plenty of air circulation and spread them out to dry further for up to three weeks. The skin will assume that brittle quality that you find in store-bought onions. It will then be ready to be used as you like.

7. Don't forget to replant the onions you use to continue the cycle.

Sweet potatoes

Scientifically, the sweet potato is the *Ipomoea batatas* and yields sweet, starchy tubers that are part of about 1,000 species under the Convolvulaceae family. Some varieties are raised as ornamental plants such as the morning glory. However, some of these tubers are poisonous so stick with sweet potatoes if you plan to eat the produce!

A sweet potato is not actually a potato; they are more like distant cousins. However, sweet potatoes are regrown pretty much the same as potatoes.

Here's how:

1. Choose a sweet potato, preferably organically grown, that has a lot of "eyes." This is where the roots will form. You can also take portions with eyes from several sweet potatoes you plan to cook, or you can plant the whole tuber if you want.

2. Cut the sweet potato into 2-inch cubes but make sure that in each cube you have at least one, preferably two, eyes.

3. Leave the pieces for a day or so in room temperature to dry out the surface moisture.

4. In the meantime, prepare a long pot with soil mixed in with some compost materials (i.e. used coffee grounds). Keep the soil loose and damp.

5. Dig out holes 8 inches deep and 1 foot apart. Place each sweet potato portion with eyes up halfway down the hole.

6. Fill the remaining 4 inches with soil. Water and place in a sunny portion of the porch or window sill.

7. As the plant grows, you may have to add more soil. Water regularly.

8. Add more soil around the plant when it reaches 6 inches tall. This is called hilling.

9. When the plant starts to die, it is getting close to harvesting.

10. Carefully dig around the plant to see how big the sweet potato is. When you think it's a good size, dig out the sweet potato and leave it in the soil for a couple of hours.

11. Take out the bulbs and spread out in a warm, dry place out of the path of direct sunlight for up to two weeks.

12. After they have cured, you can now store the sweet potatoes or enjoy immediately. Don’t forget to replant to keep the crop going!

MUSHROOMS

Who doesn't love mushrooms? Sauté them in butter and garlic (which you grew yourself!), chop them up, and add to your omelet or toss them whole or sliced in your stir fry. They are spongy, tasty, and just wonderful. And the best thing? It's best to grow them indoors in a pot because they are more likely to grow without competition!

However, it is a little more difficult to regrow mushrooms because they have specific requirements for growth. Ideally, mushrooms should be protected from direct sunlight and planted in humid conditions in nutrient rich soil. In other words, mushrooms love the dark, damp places where nasty things grow!

This one is pretty hit and miss; your mushroom cutting may take or it may not. Most people buy kits which makes use of spores but that rather defeats our purpose here, doesn't it? At any rate, you'll know in a pretty short time if it is going to work or not so why not try using kitchen scraps first?

Note that many mushrooms are poisonous so don't use wild mushrooms unless you know what you are doing. The best would be to buy commercially grown mushrooms in the supermarket and propagate those.

Here's how:

1. Prepare your soil by mixing it with compostable materials in a pot (refer to the section on making your own compost). This can take one to two weeks.

2. When your soil is ready, take some fresh mushrooms. Make sure they are the edible kind! Cut off the top of the mushrooms and use them for your cooking. Set aside the stems for propagation.

3. Place the stems in the soil, making sure to keep the top surface exposed to the air.

3. Place the pot in a warm, humid spot in your kitchen.

4. If your cutting "takes," you should see a new head growing pretty quickly.

5. When the heads form completely, harvest the mushrooms and replant the stems to continue the cycle.

Romaine Lettuce

Romaine lettuce is a sturdy type of lettuce that stands up well to heat and home growing. It is also known as cos lettuce and is a Greek variety that is often used in salads and sandwiches. It makes complete sense to regrow it for your own use.

Here's how:

1. Choose a head of romaine lettuce that is firm and fresh. Cut off the leaves leaving about an inch of the flesh attached to the root part.

2. Place water in a shallow container and submerge the root but leave the top above the water line.

3. Place it in a sunny spot of the window sill or the porch, spritzing the top occasionally to keep it from wilting. Replace the water every two days and after a week you should see new leaf and root growth.

4. Prepare a large pot with soil and bury the plant in it save for the new leaf growth.

5. After a few weeks, you will see a whole head form. Harvest when it is fully grown.

6. Replant the root to continue to cycle.

Celery

You can eat it raw dipped in sour cream or slathered with peanut butter. You can also chop it up and add it to soups and stews for great flavor. It can also be dried and used as a seasoning. Yep, it’s celery.

In general, it is the stalk that most people go for, and it should be firm and snap easily when bent. Even when it is slightly wilted, it is still a great vegetable for eating. Just like romaine lettuce, you need the root part to regrow celery, but it is so easy it’s ridiculous!

Here’s how:

1. Choose a bunch of celery stalks which are firm and fresh. Cut off the leaves and most of the stalks, leaving about two inches of the flesh attached to the root parts.

2. Place water in a narrow container and submerge the roots but leave the tops above the water line.

3. Place it in a sunny spot of the window sill or the porch, spritzing the tops occasionally to keep the tops from wilting. Replace the water every two days and after a week you should see new leaf and root growth.

4. Prepare a large pot with soil and bury the seedling about four inches apart, keeping the new growth above ground.

5. After a few weeks, you will have a large number of stalks that can grow as high as a meter.

6. You can use the outer stalks as you need them, keeping the roots in the soil to continue producing new stalks.

Bok Choy (White Cabbage)

A member of the cabbage family, Bok Choy is often used in Chinese dishes. It is great in a stir-fry and noodle soups and can also be eaten raw. A cup of this vegetable contains more than the recommended dietary allowance for Vitamin A and about 66% of Vitamin C. You can easily regrow Bok Choy, and it takes about two months from start to harvest.

Here's how:

1. Choose a head of Bok Choy that is firm and fresh. Cut off the leaves, leaving about two inches of the flesh attached to the root parts.

2. Place water in a shallow container and submerge the roots but leave the tops above the water line.

3. Place it in a sunny spot of the window sill or the porch, spritzing the tops occasionally to keep them from wilting. Replace the water every two days and after a week you should see new leaf and root growth.

4. Prepare a large pot with soil and bury the seedlings about four inches apart, keeping the new growth above ground.

5. After a few weeks, you will have a whole head. Harvest when it appears fully grown.

6. Remember to regrow the roots the same way to continue the cycle.

Cabbage

If you like your coleslaw, then you like cruciferous vegetables which, aside from cabbages, include broccoli, Brussels sprouts, and cauliflower. Cabbage is thought to be anti-cancer food, which is great because it's yummy! It is also high in beta carotene, fiber, Vitamin C, and selenium and is a proven cure for stomach ulcers.

If you want to grow your own cabbages, then you're in luck. It is easy to regrow if you get plenty of sun and you plant it in nutrient rich soil.

Here's how:

1. Choose a firm and fresh head of cabbage. Cut across to take off the leaves with about two inches of the flesh left attached to the root parts.

2. Place water in a shallow container and submerge the roots but leave the tops above the water line.

3. Place it in a sunny spot of the window sill or the porch, spritzing the tops occasionally to keep them from wilting. Replace the water every two days and after a week you should see new leaf and root growth.

4. Prepare a long pot with soil and bury the seedlings about 12 inches apart, keeping the new growth above ground.

5. After a few weeks, you will have whole heads of cabbages on your windowsill! Harvest when they appear fully grown.

6. Remember to regrow the roots the same way to continue the cycle.

Carrot Tops

We are including carrot tops in this section because, while you cannot grow actual carrots from another carrot (carrot producers use seeds), you *can* easily grow carrot tops, and these are edible as well.

Most kitchen gardeners classify carrot tops as a fun project for kids and an ornamental plant for the window sill, but there are many dishes where you can make use of the carrot greens. It's full of vitamins and minerals like potassium. It is a little bitter, which may not appeal to some, but not much more than arugula. It can be added to salads. Chop it up with garlic and vinegar and you get a great marinade or a spread for toast. You can also add it to soup, stews, egg dishes, stir fry, casseroles, burritos, and pizzas.

It is easy to cultivate carrot tops, which is why you can have your kids do it. Think of it as a less stressful pet than a dog, and you can't eat the hair of a dog!

Here's how:

1. When preparing carrots for cooking, cut it off about two inches from the top. Make sure the top is intact, with a little bit of the stems still there.
2. Put some water in a shallow dish like a stray salad bowl or pie plate and add some decorative stones if

you want. Place the carrot top cut side down in the water.

3. Place the dish on the sunny part of the windowsill. Replenish water as necessary.

4. After a few days, leaves will appear.

4. You can keep the budding plant in the water to use as a table centerpiece, or you can transplant it to a pot with soil at this point. This way, you can continue to harvest the greens and the plant will continue to grow.

5. You can also try the same with beets and turnips; the greens from these root vegetables are also edible like carrot tops!

Tomato

The tomato, which is actually a fruit, is often eaten as a vegetable, and there are whole industries (think pastas, pizzas) built on this common yet delicious produce. Home kitchens all over the world always have a ready supply of these fruits, so it makes great sense to grow your own and ensure you never run out!

Here's how:

1. With other plants that we have discussed, the germination is usually in water or direct to the soil. With tomatoes, however, you will need to put them in seed trays (they look a little like large ice cube trays) to germinate. Prepare a seed tray by filling each section with Hyponex potting mix or any soil mix that is light on fertilizer and holds water well without being dense.

2. Take out the tomato seeds and rinse thoroughly to remove any tomato juice. Place each seed ¼ inch into the soil in a section of the seed tray.

3. Cover the seed tray with plastic wrap for up to 10 days or until sprouts appear. The plastic wrap helps break down the shell of the seeds.

4. While still in the seed tray, gradually expose the seedlings to sunlight, starting with 3 hours a day and adding 10 minutes more each day until you get to 6 hours. This will acclimatize the seedlings and prevent sun damage. Add water when the soil dries but don't put in too much or the roots will rot.

5. When the stalk reaches a height of 2 inches, it is ready to be transplanted to a larger pot filled with the same soil mix you used in the seed tray.

6. After transplanting, insert a stick next to the plant deep into the soil and tie the growing stalk to it with twine. Tomato plants are vines, so the stick will force it to grow up.

7. As the plant grows, trim off the lower leaves to encourage fruiting.

8. Harvest the tomatoes as needed. When the weather turns cold, it is perfectly all right to bring in your tomato pots.

If you picked the varieties that bear fruit continuously like the cherry and plum type of tomatoes (they are the smaller ones) then you will always have tomatoes in the house!

Chili (or Sweet) Pepper

Another great houseplant idea that can also be edible from your kitchen scraps is to grow your own pepper tree. Store bought sweet or chili peppers yield quite a lot of seeds that you can start with, and it will bear fruit that change colors like Christmas lights. It also produces pretty flowers, and you can harvest the fruit when you need it.

Here's how:

1. Save the seeds the next time you use a pepper fruit.
2. Prepare a shallow container with rich moist soil and place the seeds on the surface, putting a thin layer of soil over the seed. Make sure the container has drain holes to prevent water logging. Place on top of the refrigerator.
3. Check it every day to make sure the soil is not dry and to see if the seeds are sprouting. It may take several days so be patient.
4. When sprouts start to appear, move the pot to a shaded area of the window sill to give it filtered sunlight.
5. When leaves begin to appear, you can safely transplant the seedlings to a larger pot to give the roots more room to grow. Water regularly.

6. After a few days, flowers will begin to appear and shortly after you will see the first pepper fruits budding. You’re in business!

Chapter Three: Eye Candy

Just because it’s pretty doesn’t mean it’s useless. Some kitchen scraps that have little chance of being made to produce anything edible can still be used for ornamentation. Moreover, the plants in this section are natural odor eliminators, air purifiers, and air fresheners. Having something pretty is also a good stress reliever, especially if you know that you grew it yourself!

Pineapple

Fresh pineapples are low in calories but rich in fiber, vitamin C, A, B-complex, copper, manganese, and potassium. Pineapples are known to have anti-clotting, anti-cancer, and anti-inflammatory benefits and help to keep the mucus membranes healthy. It is also good for the heart.

A pineapple is actually a bunch of berries that fused together. The uncanny resemblance of the skin to closed eyelids prompted the Filipino legend about a young girl named Pina who was so lazy that whenever her mother asked her to get something, she kept asking “where?” without bothering to look. To teach her a lesson, a *diwata* (fairy) turned her into a fruit with eyes all around so she would see everything. Of course, the “eyes” are actually the individual berries so no worries!

As a fruit, pineapples can be eaten fresh, preserved in syrup, crushed for ice cream, juiced, and cooked. Because of its sweet, tangy taste and health benefits, it is a great fruit for daily consumption, which makes perfect sense to grow yourself. However, pineapples are a slow-growing plant; don’t expect to harvest

fruit any time soon. Pineapples start fruiting about 2 years down the road.

But hey, while it’s growing, it is a rather striking plant, so it looks great for indoor ornamentation.

Here’s how:

1. Pick a pineapple that is fresh and firm but not overripe, preferably organically grown. Leaves should be green and the skin golden brown. Try tugging gently on one of the leaves; if it comes out easily, it is overripe. Check the base of the leaves for scale pests which will look like grey spots. You don’t want that one. Choose another pineapple.

2. After you have chosen a pineapple, it is time to prepare the crown for replanting. Grip the leaves into a bunch and give it a good twist to remove the crown off the fruit. If you don’t have the upper body strength for that, you can use a sharp knife to slice the crown off, but you need to make sure you trim off all the fruit flesh until you get to the root buds at the base of the crown. Any flesh left on the crown will encourage rot and kill your cutting. Trim off some of the leaves closest to the crown so the shape is more or less like a tube and there is about an inch of the crown free of leaves.

3. Put warm water in a container and place the prepped crown inside cut side down. Do not submerge the entire cutting.

4. You need to place this tropical plant cutting in an area that is always warm and/or sunny. If you don’t get a lot of sun on your windowsill or porch, the top of your refrigerator will also do the trick. Replace the water every day.

5. After about a week, roots will start to grow. In the meantime, prepare a large porous clay pot with fast-draining potting material such as cactus potting soil. Pineapple cuttings will not flourish in sodden soil. Line the bottom of the pot with stones before putting in the potting soil. Plant the pineapple cutting, leaves out, and water thoroughly. Place in the sunniest spot of the window sill or porch. Cold will kill it so bring indoors next to a window during winter months.

6. Water the plant every day until it is established and then water weekly. The soil should be neither wet nor dry. If you put in too much water, the cutting will rot.

7. You will notice growth in the next few months, but it will only start producing fruit after about 2 years. You can encourage flowering at this point by

enclosing a ripe apple with the mature plant using a large plastic bag for a week or so.

8. When the plant starts flowering, the fruit will start to develop and after 6 months, it will be ripe and ready to eat. You need to keep the fruit on the plant to ripen; it will not ripen anymore once it is picked.

9. One plant produces one fruit, but it is possible to get two more crops if you continue watering the plant and trim off all but one or two of the shoots that will develop in the original crown. You can plant these cut-off shoots the same way you did the crown for new plants.

It may seem like a lot of trouble and time for one pineapple that isn’t that expensive if you buy it off the shelf, but pineapple plants are multi-use. Even if you don’t get a fruit, it looks great and it makes the air smell better. You can also grow more than one so that you get more produce. The pineapple fruit will keep on the plant for several months, so you don’t need to harvest it at once.

Avocado

The pit of the avocado is not edible, so you will probably toss it after you make an avocado sandwich or guacamole. Instead, you can save the pit and regrow it so you can have a fun learning project with your kids and a house plant as well.

You will most probably never eat the fruits of your labors with this one, though. Avocado plants grown from the pit and reared at home rarely bear fruit and even if it does, it takes upwards of five years before it does. If you really want to harvest avocados within a realistic time frame, you will have to do it from a graft from a fruit-bearing tree.

But if you just want to have fun with kitchen scraps and get a great-looking tropical indoor plant for free, you can just use the avocado pits.

Here’s how:

1. Take the avocado pit and wash thoroughly. Let it dry overnight.

2. When the pit is dry, peel off the outer skin. Pierce the center of the pit, bisecting the broad and pointy side, with four toothpicks on all sides for support.

3. Take a narrow-mouthed container and place the pit at the mouth. Fill the container with water so that a

third of the pit is submerged, pointy side up.

4. Place the container in a warm, shaded place such as the shady area of the kitchen. Roots and stems will begin to grow from the pit in about 2 weeks or so. Replace the water every two days.

5. When the stems reach a height of 7 inches, prune it back to 3 inches to encourage root development. When the stems grow back and grow leaves, and the roots appear strong, lift from the container and remove the toothpicks.

6. Prepare a large pot with nutrient-rich soil. Make a hole and carefully place the seedling inside and refill the sides, leaving half the seed above ground. Water regularly. If the leaves start to turn yellow, you may be giving it too much water.

7. Place the pot in a sunny area. If the leaves turn brown, you need to neutralize the excess salt in the soil by wetting it through thoroughly and letting the water drain.

8. When the stems reach a foot in height, cut it back to half to encourage the growth of new shoots. You want it to spread as much as possible. Pick off some of the leaves to encourage leafing. Avocado plants

are like the Hydra: for every leaf you remove, two will grow back.

Next, plant the avocado in soil. Be careful not to damage the roots by making a hole in the soil before sliding the plant in. Gently fill the hole with soil and tamp lightly. To encourage the avocado tree to grow full and bushy, pinch off new leaves.

Apple

Everyday wisdom states that an apple a day keeps the doctor away. This is because apples are very nutritious, so it keeps you from getting sick easily. Apples also smell great, which is why we put the scent in everything from shampoo to candles.

Apple trees are also eye candy. Apple trees are part of the rose family, and they produce white and pink flowers and when they bear fruit, it looks adorable although you may not want to eat them. You can grow your apple tree indoors, but you have to keep it small. Even apple trees planted outdoors are unlikely to get fruit that you will enjoy eating. Apple trees don’t grow to type, which means the fruit will not resemble the apple from which you took the seeds. Anyway, it takes at least 7 years before an apple tree will bear fruit, so that’s a long wait for apples!

At any rate, it is a good way to get some pretty trees on your property and a good way to use those seeds that you usually throw out with the apple core!

Here’s how:

1. Pick out the seeds from an apple (you can use seeds from different apple varieties) and dry them out overnight.

2. Soak the dried seeds in warm water overnight just before germinating them.

3. Place the seeds on a damp towel which is then folded into quarters. Put in a lot of seeds; only a third of them will germinate. Place the damp towel in a resealable plastic bag. You can also use moss instead of a damp towel. Place the bag in the refrigerator. This is called stratification.

4. After 4 to 6 weeks, you should see some of the seeds sprouting.

5. Select the seeds that have germinated and plant 6 in each pot filled with good quality potting soil. Press in the seeds so that they are covered by a thin layer of soil.

7. Place the pot/s in a sunny area and keep the soil moist.

8. After about a month, you should see signs of germination. You can now transfer the top of the class to a much larger pot and water every day. It should get plenty of air and sun.

9. If you want, you can transplant the sapling to your yard (if you have one) when it is big enough. Prune the leaves as little as possible in the first few years to encourage growth and fruit-bearing. Wait for the tree

to bear fruit. In the meantime, enjoy taking care of your very own apple tree!

10. If you don’t have a yard, you can keep the tree in the pot but prune regularly to keep it from outgrowing the pot. If you’re lucky, your indoor tree will bear fruit after a few years but don’t hold your breath.

Orange

Citrus fruits make nice indoor plants because they look pretty and the flowers smell wonderful. By the time they grow to tree size, they're still pretty small so you can keep them in the house. Oranges are especially nice because of the strong scent of the flowers. You aren't likely to get fruits anytime soon but the flowers alone are good enough.

Here's how:

1. Take out the seeds from an orange and soak them in water overnight. Discard any seeds that immediately float to the top; these will not germinate.
2. Prepare a pot with potting soil and insert the seeds ½ inch deep.
3. Cover the pot with plastic and place somewhere warm for about four to five weeks. Check occasionally to see if there is any progress in the germination.
4. When sprouts appear, remove the plastic and place the pot in a bright area of your sill or porch but avoiding direct sunlight.
5. When leaves start to appear, you can now transfer the individual seedlings into their own pots also filled

with potting soil. Use fertilizer if desired, carefully following instructions for use.

6. Water occasionally to keep the soil moist but not saturated. At this point, you can place your plants in direct sunlight.

7. Bring the plant indoors when it begins to get cold, place in a warm place with no drafts, and water it just a bit. Don’t fertilize. Look out for spider mites and mealy bugs.

8. Encourage foliage by cutting off new leaves during the growing season.

You can use the same process for grapefruit, lemon, and other citrus fruits. Mix it up, why don’t you? Just don’t plan on having juice parties as “fruit” of your labor; that is, unless you’re planning about 15 years down the road!

However, the leaves of a citrus plant can be used to make tea, either by itself or in combination with other teas. You can also use it as a fragrant wrap for fish or meat, imparting some of that citrusy essence when grilling or baking. So technically, this is not just eye candy!

Chapter Four: Black Gold

Okay, we have talked about a lot of stuff we can regrow and how to do it, but there are still some organic materials that are not suitable for re-growing. So I guess we just throw it out, right?

Wrong.

Compost, which some refer to as black gold, is something that can be produced using the organic materials that would otherwise go into the garbage bin. Even if just a little of the trash is usable in this way, say 10 percent, that is still a significant reduction in the garbage we send to landfills if every household does it regularly. That is still 10 percent less methane emissions and every little thing helps. Besides, compost is a natural partner of our re-growing project as it helps enrich the soil we use naturally, instead of having to go and buy fertilizer.

So what is composting, really, and how can you make your own?

Compost Defined

Compost is decomposed organic matter used to increase the richness of soil and as a fertilizer. It is used mainly in organic farming and a key element in recycling organic waste. The materials used for compost are basically plant material and food waste where water has been introduced to encourage rotting to produce humus over time. Decomposition is accelerated when plant mater is shredded (such as potato peelings) and enough air and heat is introduced. Organic matter breaks down faster in a warm, humid environment with a good supply of oxygen, which is why this is called aerobic digestion. The need for oxygen also explains the regular turning of a compost pile. At a certain point, worms and

fungi will be present which will help break down the organic material even faster.

Compost is rich in nutrients that can be beneficial for plants, and it is a natural pesticide which is essential in organic farming. It also helps condition the soil and of course converts otherwise landfill material into something actively useful. When compost is ready, it is usually a dark brown, crumbly product with an earthy aroma.

DIY Composting

While we are intent on making use of as much food waste as we can, you **cannot** add cheese, oil, meat, fish, or grease to your compost pile. It will ruin your compost and all you will be left with is a lot of garbage and rats. It will also make your compost pile smell bad.

Other than those mentioned above, most food waste can go into the compost pile. These include coffee grounds, spoiled milk, stale donuts, vegetable peelings, fruit peelings, egg shells, cereals, breads, leftovers, spices, tea bags, pizza crusts, etc. Mix it up with leaves, flowers, and other yard waste and you clean up your yard as well.

Basically, all you need to do is to pile in everything together in your yard or in a composting bin. You can build your own composting bin or you can buy one. For ease of use (and if you don’t want to keep turning your compost pile) invest in a compost bin that you can tumble for easy aeration. Make sure there is enough moisture so your compost pile doesn’t dry out.

Yard composting

If you have a big enough yard, the easiest way to compost is to make a pile right on the ground. It is convenient for adding in yard waste, and the open area will ensure that you get enough heat and air in the mix. Of course, you will have to do your composting during warm months.

Here's how:

1. Select an area in your yard which is dry with some shade and within easy distance of a water source.

2. Put your yard and food waste (always making sure no animal remains, cheese, grease, or oil makes its way in) into a pile. Chop up or shred large pieces of waste. Cover with a tarp or large plastic sheeting.

3. Put in some water on the pile after each addition of raw materials.

4. Once the compost pile is big enough, mix it up and cover the entire pile with grass cuttings and leaves.

5. Let nature takes its course, which can take a couple of months. Turn the pile occasionally with a pitchfork or shovel to aerate and distribute the moisture evenly.

6. You can add lime to keep flies away.

7. When the bottom of the pile turns a dark brown color and looks crumbly, it is ready for use.

Building a Composting Bin

As mentioned earlier, if you don’t have the space for a yard compost, you can build your own composting bin. You will need a large drum with a cover and a plastic garbage container that can fit in it, a brick, soil, and insulation material.

Here’s how:

1. Drill holes into the sides and bottoms of the plastic garbage container.

2. Position the brick in the center of the drum and surround it with soil.

3. Place the plastic container with the holes on top of the brick.

4. Throw in your yard and food waste into the plastic container then place the lid on the drum, making sure the pile is sufficiently wet.

5. Wrap the insulating material around the drum to trap the heat.

6. Keep adding raw waste until the plastic container is half full. Give the contents a good turning with a pitchfork or shovel and cover the top with fresh grass cuttings and leaves. Replace the cover.

7. Wait for two months, occasionally checking the moisture content of the compost pile and giving it a good turn.

8. Add in new materials, making sure the older contents end up on top.

9. When the compost is dark brown with an earthy smell, it’s ready for use.

If your pile starts to smell, it may mean you are not turning it enough so there’s not enough air. If you are using a composting bin, simply add grass or other yard waste on top every time you dump in a fresh batch of kitchen scraps and after you give it a good turning.

Once your compost is ready, you can mix it with the soil that you will use for re-growing your useable kitchen scraps!

Don't Want to (or Can't) Compost?

If you don't have the space for making your own honest-to-goodness compost, there are food scraps that you can use by burying it into the soil or placing it around the plant you need to feed. Either method will serve the purpose of fertilizing (and even as a natural pesticide) without going through the composting process. These include:

Used coffee grounds – coffee is rich in nitrogen. You can mix the coffee grounds into the soil or scatter them around existing plants

Egg shells – finely crushed shells provide a rich source of protein, and they discourage pests from taking up residence in the soil or on the plant. Scatter them around the base of the plant to make it big and strong. It won't work for your kids, though!

Banana skins – bananas are rich in potassium, which is why they are healthy to eat. The skins are equally endowed and are a great addition to soil for plants that you want to bloom. Banana skins also repel aphids. Before cutting the banana skins into tiny pieces and mixing them with soil or embed them deeply in the soil around an existing plant, rub the

leaves of the plant with the inside of the skins to repel pests.

Orange peels – Cats may mistake your potted plant for a kitty litter. To discourage them, scatter orange peels on the soil around the plant. It’s also good for the soil, by the way.

Garlic skins – even if there aren’t any vampires, garlic can protect your plants from life -sucking garden pests. Simply bury garlic skins around your plants to discourage infestations.

Milk – while you shouldn’t put cheese in your compost or in the ground, milk is an effective natural pesticide. Mixed with a little water, you can wash the leaves of your plants to insect proof them.

Cereals, bread, other fruit and vegetable peels, pulp, and seeds can all be mixed up and broken up into little pieces to be buried in the soil. They will decompose without any further intervention and feed the soil and earthworms alike.

Summary

When we talk about making money from trash, we think of big-time recycling or environmental movements that seem strangely divorced from what we do every day. But in reality, there is money in trash in our homes and kitchens, as we have proven with the previous sections. And what do we do? We throw them out!

It is not always easy to see how with a little ingenuity and effort we can make little economies in a myriad of ways that all add up in the end. For example, instead of buying produce all the time, we grow some of them, so we save on cash. We have also described ways to grow ornamental plants and trees instead of buying them from the nursery, which also happens to help clean the air in our homes. This means we get sick less often, so that’s more money in the pocket - all from the things we used to simply throw out.

We have shown how we can interact with our family by making the re-growing of kitchen scraps into fun projects. We not only strengthen our relationships with our kids, we also get bragging rights when

friends and family come over and we show them our kitchen garden.

Most people would think it is too much trouble; it is much easier to go out and buy the things we have described in this book. Does it really matter if we grow our own tomatoes or not?

It is true that in most cases, our cash savings are not that much, but the benefits that accrue from knowing we are responsible for growing living things in our homes that we can use in various ways is really something. And if everyone does just a little bit of what we've described in this eBook, it can mean a significant shift in our largely commercial, convenient, out-of-touch lives.

And we have mentioned how making use of our organic trash reduces our environmental footprint, haven't we? Now that's the greatest savings of them all.

Excerpt From The Vertical Gardening Guidebook

Composting For Your Vertical Garden

When I was a kid growing up, my parents had a big “compost pile” in our back yard. It was always my chore every week to take out the “compost bucket” underneath our sink.

We always had a very strict policy – if we were going to throw something away and it was food scraps, we had to throw them in the compost bucket. If it was plastic or paper trash, we had to throw it in the trash can. I just thought it was normal to always be composting!

I remember playing out in our big compost pile as a kid. I would always have fun using a pitchfork to toss the fresh food scraps in with the rich, dark compost. Of course, there were times when the smell was so bad taking out the compost bucket… but I do have very fond memories of composting as a young kid!

Above is a picture of my compost pile at my parents’ home where I grew up. That’s good compost!

Compost isn’t just for fun though – it’s one of the best forms of fertilizers that you can use for your vertical garden. If you are looking for a sure way to give your vertical garden plenty of nutrients, and cheaply, composting is definitely the way to go.

The great thing about composting is that you can create it on your own. You can start off with a store-bought package of compost, but you won't have to keep buying it. Compost is simple to make and affordable – in fact, it can be totally free!

Composting the Cheap Way

First, we'll talk about the frugal way to create compost on your own. Before we get into that, let's talk about what compost is...

Compost is a mixture of organic matter that has begun to decompose, transitioning into awesome fertilizer for your soil. Some people even grow their fruits, vegetables, and herbs directly in compost without any soil. Compost can be made up of dirt, scraps of veggies, grass, flowers, leaves, fruits, mushrooms and, other scraps that grow from the ground.

You can place this in a wooden box or container with earth worms, scraps of cut grass, leftover veggies and fruits, then cover it up and let it sit to begin decomposing. If there's a dry spell or drought, you should water the compost pile a little to keep it damp and so that the earthworms don't dry out. The water will also help the bacteria decompose the organic matter – they can't do it if there's no moisture!

Place your compost box in a warm place in your home or outside (preferably outside because of the smell, but there are indoor composting units you can buy that seal tightly and keep the smell at a minimum). You should stir or mix your compost every now and then to allow oxygen to penetrate through the bottom layers.

Once your compost is ready, you can begin using it in your garden. There are soil tests that you can use to see how much nutrients are in your compost. You should try using nutrient-rich organic matter for your compost such as mushrooms, peat moss, and scraps of veggies. Of course, to keep things affordable, you can stick with composting the scraps of yard and food scraps that you commonly produce.

Compost Piles (also called Compost Heaps)

Another cheap way to create compost on your own is to create heaps of scraps. This is probably the most cost effective because it doesn't require you to buy or build any structures. You simply throw all your old food scraps into a contained pile somewhere in your yard.

A small compost pile could be about five feet wide and three feet tall. The length and size of your compost pile will vary based on how much food scraps and organic material you throw in and how quickly you use it in your garden.

Heaps should be used if you have sufficient space in your yard. Simply add scraps to the pile that you accumulate daily or keep them in a container and dump them into a heap once you have generated enough. By creating a heap in the fall, your compost will continue to decompose throughout the winter months.

If space allows, you should try to create two heaps of compost. Once the first heap is large enough, then allow it to decompose, while you work on building the second heap. It's not required for you to turn the compost in your heaps, it is entirely up to you. But keep in mind that the decomposition process will take longer if you don't.

Avoid throwing food scraps onto a heap of compost that has not been turned because it will attract insects (mostly flies). Wood can also be added but make sure that they are chopped up, so that the pile doesn't become brush. Wood takes longer to decompose, sometimes up to a couple of years – but it will make a richer compost when you combine as many kinds of compostable organic material as you can find.

Sheet Composting

If building heaps of compost isn't something you want to do, you can use this method instead. All you have to do is spread a thin layer of organic materials on an area of your garden – this can be materials like leaves, food, garden scraps, and cut grass all of which should be shredded or chopped before being added. Once this is done, you will then till the layer of materials using a spade, hoe, or other tool.

One issue with sheet composting is that it tends to release carbon residues, which will pull nitrogen from the soil to help with decomposition. Also, if you have items in your compost that are high in nitrogen and could end up releasing nitrogen too fast, this could slow down the decomposition process.

The best time to do sheet composting is in autumn. The compost should be spread out in a two inch by four inch layer. The best tool to use for tilling is a rotary tiller, if you're planting a vegetable garden. A garden fork or hoe would be best if you're planting perennial or bulb flowers.

Sheet composting in action.

Trench Composting

Trench composting is known to be one of the easiest ways to create compost from food scraps. All you need to do is dig a hole in your yard that is about a foot deep, then simply chop up and mix the food scraps with the soil you dug up. Afterward, you will place about eight inches of additional soil on top. If the temperature is warm enough, the compost will take between one month and a year to decompose.

There are some people who randomly make trenches of compost, while others create an organized system. One system that is commonly used is to bury food and garden scraps inside of holes that were dug near the drip line of bushes and trees.

Trench composting in action.

In England, they use a trench composting system that involves a three-season rotation, known as vertical composting. The garden is divided up into rows that are three inches wide. Here is how the system works:

Year One – A hole is dug that is a foot wide and then filled with compostable materials. Once the compost is an inch high, the hole is covered with soil. A one inch section is left open as a path right next to it.

Next in line is another one inch strip that is used to plant your garden items. In all, there are three rows.

Year Two – Unlike with year one, the third section is the one used for the trench. The same steps are used to create the compost. Your garden is planted in the second row and the first row is now the walking space.

Year Three – The section that was used for the trench in year one and the walking path in year two now becomes the planting area, which should be rich because the compost should be fully decomposed. The second space is now the trench and the third space is now for walking.

More Advanced Composting Supplies

There are other different methods of composting that you can use that require certain equipment. Some equipment is cheap, while others are more on the expensive end. First on the list are holding units, which are bins that are used to throw your kitchen scraps into.

Little maintenance is needed with most models, and they're small enough to be used on apartment and condo balconies. You should use non-wood materials for your compost in holding units. Just throw in the scraps as you get them, instead of trashing them.

Holding bins are easy to use but require time to generate ready compost. They don't require you to turn them at all, which is why the process is a lot slower – sometimes taking as long as six months to two years. The process will work much faster if you add earth worms to your compost bins!

Portable units can be purchased that can be turned and aerated. They can be moved about easily. These usually come in the form of plastic, wire fencing / hardware cloth, wood with wire frames, or snow fencing.

You can try increasing the aeration of the compost in the holding units by poking holes into the soil and placing ventilating stacks in the center. It will look like pipes sticking out of the middle of the dirt which will allow oxygen into the soil, further decomposing the organic matter.

You will have to place the pipes down before pouring in the compost. The pipes can be made out of wire mesh or even grouped together sticks that are tied together loosely. If you decide to use PVC pipes, make sure that they are about an inch in diameter or bigger. Drill holes throughout the sides of the pipes to give more aeration to your pile.

Some people place down a plastic aeration mat or wooden pallet before dumping in the compost. Since you will be continually placing in new organics into your compost, the finished compost will usually be found near the bottom of the pile.

When needed, you can remove the compost at the bottom of the heap for your garden. Some holding bins have removable doors at the front or

bottom, so that this can be easily done. If you want, you can remove the completed compost and place it in a separate bag.

Keep in mind that holding units that are heavier or permanent and have no removable doors will require more effort to create the compost. You will have to remove the finished compost to another container. It’s a good idea to have about three of these bins – one could be for finished compost, another for maturing compost, and the third for fresh compost.

You have the choice of buying a holding bin that is made of plastic or wood or building one yourself using hardware cloth, pallets, metal barrels, limber, and tires. These permanent structures can also be made with bricks, rocks, and concrete blocks.

If you decide to build one yourself using wood, avoid using those that are penta, creosote, or copper arsenate (CCA). Don’t use these types of wood around your edible gardens either! These heavy metals can leak into your soil and go straight through your skin, giving you heavy metal toxicity or poisoning! I highly recommend you use wood that is naturally resistant to decay, such as cedar or pine that hasn’t been treated.

Turning Units

Unlike typical compost bins, the turning units are made specifically for aeration. You are able to spin this to keep oxygen flowing through your compost. If you're looking to create compost faster then turning units are the kind you'll love. All of the aeration forms bacteria that decompose the compost quicker.

You will find two different types of turning units available – a series of bins or a rotating barrel. By turning the bins every five to ten days and within two months or less, your compost will be ready – if your compost has a good mixture of carbon, nitrogen, and moisture.

By heating up the compost between 90° and 140° Degrees Fahrenheit, it will kill diseases, fly larvae and weed seeds. This is also a good environment for the compost to decompose. Turning units will cost a bit more than holding units. If you decide to build one on your own, it will take a little more effort upfront.

A small compost turning unit.

Those who buy the turning bins that have multiple bins and rolling balls sometimes find it hard to operate, especially if they have problems with their back or physical limitations. There are some turning bins that are created to have easier use and maintenance. Barrel turning units are smaller in size than the other types of bins so if you don't require too much compost, then this could be the option for you.

With the turning units, make sure to accumulate your food waste in a container so that when you place it into the bin it is filled to the prescribed level. The container you save it in should be pest-proof.

If you'll be keeping the compost container indoors, there's a neat trick you can use to reduce the smell – just throw a light layer of saw dust on top of the scraps.

What Compost Should Look Like

You want your compost to be rich, dark, and earthy like in the picture below from my compost pile at home. It shouldn't have any bad smell from food scraps – the bacteria should have broken all that down by the time you use it for your garden.

[End of Excerpt] If you enjoyed reading this excerpt from *The Vertical Gardening Guidebook*, you can grab your copy here:
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About The Author

Will Cook is the bestselling author of *Urban Gardening* and *Indoor Gardening*. Will is an avid gardener and loves growing his own fresh food on his balcony. Will believes the world would be a better place if everyone cared for a few plants and grew their own food (even if it's just a little bit).

Connect with Will on Facebook at http://on.fb.me/HmllNU

Recommended Books on Gardening and Sustainability

Urban Gardening: How To Grow Food In Any City Apartment Or Yard No Matter How Small

This is a fantastic book for anyone in the city who wants to grow a fabulous urban garden.

The Vertical Gardening Guidebook: How To Create Beautiful Vertical Gardens, Container Gardens and Aeroponic Vertical Tower Gardens at Home

This is a great book for anyone interested in learning how to grow vertical gardens which allow you to grow more food in less space.

Indoor Gardening: How To Grow Gorgeous Gardens Indoors With Ease

This book is perfect for anyone who wants to grow an indoor garden for food, fun, or just to create a gorgeous ambiance in your home. Did you know that some plants can remove as much as 87% of the toxins in your home in just 24 hours?

Container Gardening: How To Grow Food, Flowers and Fun At Home

This book is great if you want to create gorgeous, fun, container gardens at home including detailed instructions for terrariums, growing succulents, bonsais, and other fun and unique plants.

Chicken Raising 101: How To Raise Chickens In Your Backyard for Eggs, Fun and Profit

This is a wonderful guide to raising your own chickens at home. If you've always wanted your own chickens but don't know how to do it right, this book is for you!

Greenhouse Gardening 101: How To Build Your Own Greenhouse for Growing Vegetables, Fruits, Herbs and Food

Greenhouse Gardening 101 is a great guide for anyone who wants to learn how to build their own greenhouse in the backyard.

Natural Mosquito Control: How To Get Rid Of Mosquitos Fast Without Toxic Chemicals or Insecticides

Natural Mosquito Control is the complete guide to killing and repelling mosquitoes without any pesticides or toxic chemicals!

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